

All Regional Engineers

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Special Provision for Traffic Signal Grounding

January 13, 2006

This special provision was developed by the Bureau of Operations to establish an electrical grounding requirement for handhole covers & frames and mast arm poles/posts.

This special provision should be inserted in all traffic signal contracts.

The districts should include the BDE Check Sheet marked with the applicable special provisions for the April 28, 2006 and subsequent lettings. The Project Development and Implementation Section will include a copy in the contract.

This special provision will be available on the transfer directory January 13, 2006.

80161m

TRAFFIC SIGNAL GROUNDING (BDE)

Effective: April 1, 2006

Add the following paragraphs to the end of Article 807.01 of the Standard Specifications:

“The grounding system shall consist of a continuous, green, insulated conductor Type XLP, No. 6 AWG, stranded copper installed in raceways and bonded to each metal enclosure (handhole, post, mast arm pole, signal cabinet, etc.). All clamps shall be bronze or copper, UL approved.

A grounding cable with connectors shall be installed between each handhole cover and frame. The grounding cable shall be looped over cable hooks installed in the handholes and 1.5 m (5 ft) of slack shall be provided between the frame and cover.

All equipment grounding conductors shall terminate at the ground bus in the controller cabinet. The neutral conductor and the ground conductor shall be connected in the service installation. At no other point in the traffic signals system shall the neutral and ground conductors be connected.”

Revise Article 873.02 of the Standard Specifications to read:

“**873.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Electric Cable – Signal, Lead-in, Communication, Service, and Grounding	1076.04
(b) Conduit.....	1088.01”

Revise the last sentence of Article 873.05 of the Standard Specifications to read:

“The type specified will indicate the method of installation and whether the electric cable is Service, Signal, Lead-in, Communication, or Grounding.”

Revise the heading of Article 1076.04 of the Standard Specifications to read:

“**1076.04 Electric Cable – Signal, Lead-in, Communication, Service, and Grounding.**”

Add the following paragraph to the end of Article 1076.04 of the Standard Specifications:

“(e) Grounding Conductor. The cross linked polyethylene (XLP) insulated conductor shall be according to Articles 1066.02 and 1066.03. The stranded copper conductor shall be No. 6 AWG and the insulation color shall be green.”